

# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

## Volume 5 | Technical Appendices

CFA4 | Kilburn (Brent) to Old Oak Common

**Baseline (SV-002-004)**

Sound, noise and vibration

November 2013

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Department  
for Transport

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# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Structure of the sound, noise and vibration appendices	1
1.2	Existing acoustic environment	1
<b>2</b>	<b>Scope, assumptions and limitations</b>	<b>3</b>
2.1	Sound and vibration sensitive receptors	3
2.2	Local engagement	3
2.3	Existing baseline sound monitoring locations	3
<b>3</b>	<b>Environmental baseline</b>	<b>5</b>
3.1	Existing baseline data collection methodology	5
3.2	Existing baseline sound levels	5
3.3	Future baseline methodology	24
<b>4</b>	<b>References</b>	<b>25</b>

## List of tables

Table 1: Existing baseline sound levels	7
Table 2: Data source coding key	23



# 1 Introduction

## 1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Kilburn (Brent) to Old Oak Common area, the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-004) (this appendix);
  - construction sound, noise and vibration (Volume 5: Appendix SV-003-004); and,
  - operational sound, noise and vibration (Volume 5: Appendix SV-004-004).
- 1.1.3 Maps referred to within this appendix are contained in the Volume 5, Sound, Noise and Vibration Map Book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

## 1.2 Existing acoustic environment

- 1.2.1 The Proposed Scheme, with the exception of the ventilation and intervention shaft (vent shaft) at Salusbury Road, the station at Old Oak Common and the Victoria Road crossover box, is in tunnel throughout this area.
- 1.2.2 The existing baseline sound environment around the vent shaft site at Salusbury Road is typical for an urban situation with busy main roads and nearby railways. Daytime sound levels are typically 65 to 70dB<sup>1</sup> in the vicinity of the railway bridge, where existing sound levels are determined by the trains on the nearby North London Line (NLL) railway, and road traffic on Kilburn Lane and Salusbury Road.
- 1.2.3 The existing baseline sound environment around the proposed Old Oak Common station site consists of a mixture of transportation, industrial and commercial sources. The railway lines here include the West Coast Main Line, Great Western Main Line, Acton Main Line and NLL. In addition, the London Underground Central and Bakerloo lines also run above ground through this area.
- 1.2.4 In much of the Old Oak Common area, the soundscape is dominated by nearby road and rail traffic, with distant road traffic from the A40 audible in some locations. This

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<sup>1</sup> Quoted dB values at residential areas refer to the free-field 16 hour daytime (07:00 to 23:00) equivalent continuous sound pressure level,  $L_{pAeq,16hr}$ .

leads to a large variation in sound level dependent upon location, and daytime sound levels typically range between approximately 55dB when distant and/or screened from these sources and approximately 75dB when nearby. During less busy periods of road and rail traffic flow, natural sound sources are can become apparent.

- 1.2.5 Night-time sound levels<sup>2</sup> in this area are typically 5 to 10dB lower than those during the day; with the greater reduction in the locations furthest or screened from the main transportation sources.

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<sup>2</sup> Night-time sound levels refer to the free-field 8 hour night-time (23:00 to 07:00) equivalent continuous sound pressure level,  $L_{pAeq,8hr}$ .

## 2 Scope, assumptions and limitations

### 2.1 Sound and vibration sensitive receptors

2.1.1 Within the Kilburn (Brent) to Old Oak Common, 175 assessment locations have been defined to represent all identified sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book). Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship; and
- healthcare facilities.

### 2.2 Local engagement

2.2.1 Discussions have been held with representatives of Greater London Authority, the City of Westminster, and the London Boroughs of Brent, Ealing and Hammersmith & Fulham regarding the approach to baseline monitoring within this area, the identification of sound and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.

2.2.2 Officers of the City of Westminster, and the London Boroughs of Brent, Ealing and Hammersmith & Fulham were invited to attend baseline sound measurements and witness the measurement procedures used in the Council's district, however, no council officers accepted these invitations.

2.2.3 Changes suggested during discussions with the Council officers have influenced the assessment locations used and the monitoring undertaken and reported in this document.

2.2.4 Local engagement through community forum meetings has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and have influenced the monitoring undertaken and reported in this document.

### 2.3 Existing baseline sound monitoring locations

2.3.1 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book).

2.3.2 As part of the assessment process, after the completion of the baseline sound survey, additional assessment locations were identified as part of the construction assessment. In order to minimise the risk of over estimating the baseline sound



conditions at these additional assessment locations, the selected levels allocated were based on the lowest survey results measured within Camden Town and HS1 Link area (CFA2), the Primrose Hill to Kilburn (Camden) area (CFA3) and the Kilburn (Brent) to Old Oak Common area. In the tables these are referred to as “precautionary construction”. In a limited number of situations, where these ‘precautionary’ (low) baseline sound levels has led to the identification of unrealistic effects, further analysis has been undertaken and appropriate baseline sound levels allocated.

## 3 Environmental baseline

### 3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound, noise and vibration is described in Volume 5: Appendix SV-001-000.
- 3.1.2 Over the Kilburn (Brent) to Old Oak Common area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:
- long-term measurements – unattended measurements of several days duration;
  - medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and
  - short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 Due to the majority of the Proposed Scheme being in a tunnel through this area, measurement locations have focused on ventilation and intervention shaft (vent shaft) locations and the area around Old Oak Common.
- 3.1.4 In this CFA a total of 14 baseline sound level measurements have been undertaken.
- 3.1.5 In Queens Park, a short-term measurement was undertaken close to the Salusbury Road vent shaft location.
- 3.1.6 In the area around the Old Oak Common Station and Interchange, two long-term measurements were undertaken at locations in Wells House Road and Midland Terrace. These measurements were supplemented by three short-term measurements undertaken at various locations around Old Oak Common.
- 3.1.7 To the north of Old Oak Common Sidings four short-term measurements were undertaken at locations judged to be representative of sensitive residential properties.
- 3.1.8 Two further short-term measurements were undertaken at locations on Braybrook Street close to the south western boundary of Wormwood Scrubs Park.
- 3.1.9 West of Old Oak Common, two short-term measurements were undertaken in the vicinity of the Victoria Road vent shaft.

### 3.2 Existing baseline sound levels

- 3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:
- For the operational sound assessment
    - $L_{pAeq,16hr}$  weekday daytime (07:00-23:00) sound pressure level;

- $L_{pAeq,8hr}$  weekday night-time (23:00-07:00) sound pressure level;
  - arithmetic average of  $L_{pAFmax,5min}$  night-time sound pressure level; and
  - highest  $L_{pAFmax,5min}$  night-time sound pressure level.
- For the construction sound assessment
    - daytime  $L_{pAeq}$  sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
    - evening/weekend  $L_{pAeq}$  sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00- 23:00; Sunday 07:00 to 23:00); and
    - night-time  $L_{pAeq}$  sound pressure level (Monday to Sunday 23:00-07:00).

3.2.2 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5: Appendix SV-001-000.

3.2.3 As part of the assessment process, after the completion of the baseline sound survey, additional assessment locations were identified as part of the construction assessment. In order to minimise the risk of over estimating the baseline sound conditions at these additional assessment locations, the selected levels allocated were based on the lowest survey results measured within CFA 2, 3 and 4. In Table 1 these are referred to as "precautionary construction". In a limited number of situations, where these 'precautionary' (low) baseline sound levels has led to the unrealistic identification of effects, further analysis has been undertaken and appropriate baseline sound levels allocated.

Table 1: Existing baseline sound levels

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
508272	Portal Way, London	LM1311	66.6	61.4	74.7	83.7	67.0	64.6	61.2	3,A,iii,b
508494	Victoria Road, London	LM1311	66.6	61.4	74.7	83.7	67.0	64.6	61.2	3,A,ii,b
510425	Wales Farm Road, London	LM1311	66.6	61.4	74.7	83.7	67.0	64.6	61.2	3,A,iii,b
510593	Unnamed Road, East Acton	LM1001	61.1	54.6	81.2	90.2	61.5	59.0	54.5	3,C,ii,b
515324	Gorst Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,iii,b
515942	School Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,i,a
516080	Chase Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,ii,b
516468	Sunbeam Road, East Acton	LM1001	71.6	65.1	81.2	90.2	72.0	69.5	65.0	3,A,iii,b
516711	Park Royal Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,iii,b
516773	Gorst Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,iii,b
516964	Cullen Way, East Acton	LM1001	71.6	65.1	81.2	90.2	72.0	69.5	65.0	3,A,ii,b
518427	Wells House Road, London	LM1052	69.7	66.5	78.2	97.0	70.0	68.2	66.3	3,A,i,a
519065	Midland Terrace, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,i,a
620006	Wells House Road, London	LM1052	69.7	66.5	78.2	97.0	70.0	68.2	66.3	3,A,ii,b
700045	Wells House Road, London	LM1051	55.5	48.8	59.9	73.6	55.8	53.7	48.9	1,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700047	Wells House Road, London	LM1051	55.5	48.8	59.9	73.6	55.8	53.7	48.9	1,A,i,a
700048	Braybrook Street, London	LM1055	48.3	40.2	52.8	57.6	48.9	46.0	40.2	4,A,ii,b
700049	Braybrook Street, London	LM1055	48.3	40.2	52.8	57.6	48.9	46.0	40.2	4,A,ii,b
700050	Braybrook Street, London	LM1055	48.3	40.2	52.8	57.6	48.9	46.0	40.2	4,A,i,a
700051	Braybrook Street, London	LM1055	48.3	40.2	52.8	57.6	48.9	46.0	40.2	4,A,ii,b
700052	Wells House Road, London	LM1053	54.6	51.4	61.4	80.3	54.3	52.5	50.6	3,A,i,a
700053	Wells House Road, London	LM1051	55.5	48.8	59.9	73.6	55.8	53.7	48.9	1,A,ii,b
700055	Old Oak Common Lane, London	LM2015	52.5	49.9	62.2	81.0	52.5	49.9	49.9	1,D,ii,b
700056	Midland Terrace, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,ii,b
700403	Wells House Road, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,ii,b
700404	Wells House Road, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,ii,b
700405	Shaftesbury Gardens, London	LM1316	73.9	70.7	87.6	106.4	73.5	71.7	69.8	3,A,ii,b
700406	Shaftesbury Gardens, London	LM1316	73.9	70.7	87.6	106.4	73.5	71.7	69.8	3,A,ii,b
700407	Hythe Road, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,iii,b
700408	Scrubs Lane, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,iii,b
700409	Salter Street, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700410	Hythe Road, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,iii,b
700411	Hythe Road, London	LM2015	55.9	52.7	62.2	81.0	55.8	54.0	52.1	1,A,iii,b
700412	Stephenson Street, London	LM0100	57.0	53.8	66.2	85.0	56.8	55.0	53.1	3,A,ii,b
700413	Stephenson Street, London	LM0101	58.8	55.6	67.0	85.9	58.7	56.9	55.0	3,A,i,a
700414	Harley Road, London	LM1318	66.1	58.0	75.8	80.6	66.7	63.8	58.0	4,A,ii,b
700415	Harley Road, London	LM1318	66.1	58.0	75.8	80.6	66.7	63.8	58.0	4,A,ii,b
700416	Harley Road, London	LM1318	66.1	58.0	75.8	80.6	66.7	63.8	58.0	4,A,i,a
700417	Victoria Road, London	LM1311	61.6	56.4	74.7	83.7	62.0	59.6	56.2	3,B,ii,b
700418	Victoria Road, London	LM1311	56.6	51.4	74.7	83.7	57.0	54.6	51.2	3,B,ii,b
700419	Old Oak Common Lane, London	LM1051	55.5	48.8	59.9	73.6	55.8	53.7	48.9	1,A,iii,b
700477	Salisbury Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,ii,b
700483	Kilburn Lane, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,i,a
700493	Claremont Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,ii,b
709502	Albert Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,ii,b
709503	Kilburn Lane, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,i,a
709504	Fernhead Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
709505	Portnall Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,ii,b
709506	Kilburn Lane, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,i,a
720001	Bethune Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,ii,b
720002	School Road, London	LM1058	62.7	55.8	69.1	73.2	63.2	60.4	55.8	4,A,ii,b
720003	Victoria Road, London	LM1311	66.6	61.4	74.7	83.7	67.0	64.6	61.2	3,A,ii,b
720004	Victoria Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720005	Albert Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720006	Volt Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720007	Harley Road, London	LM1315	60.9	52.8	69.1	73.9	61.5	58.6	52.8	4,A,iii,b
720008	Minet Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720009	Volt Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720010	Acton Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720011	Portal Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720012	Seacole Close, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720013	Garrett Close, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720014	Victoria Road, London	LM1311	66.6	61.4	74.7	83.7	67.0	64.6	61.2	3,A,iii,b
720015	Wales Farm Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720016	Chase Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720017	St. Leonards Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720018	School Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720019	Chase Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720020	Sunbeam Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720021	Standard Road, London	Precautionary	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b



Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
		construction								
720022	Victoria Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720023	Telford Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720024	Victoria Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720025	Stephenson Street, London	LM0100	57.0	53.8	66.2	85.0	56.8	55.0	53.1	3,A,iii,b
720026	Goodhall Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720027	Goodhall Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720028	Stoke Place, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720029	Old Oak Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720030	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720031	Bashley Road, London	LM1315	60.9	52.8	69.1	73.9	61.5	58.6	52.8	4,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720032	Cunard Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720033	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720034	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720035	Chandos Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720036	Old Oak Common Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720037	Telford Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720038	Telford Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720039	Old Oak Lane, London	LM1316	73.9	70.7	87.6	106.4	73.5	71.7	69.8	3,A,iii,b
720040	Volt Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720041	Station Road, London	LM1316	73.9	70.7	87.6	106.4	73.5	71.7	69.8	3,A,iii,b
720042	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720043	Salter Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720044	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720045	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720046	Hythe Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720047	Ashmore Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720048	Bravington Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720049	Bravington Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720050	Claremont Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720051	Salisbury Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720052	Kilburn Lane, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,iii,b
720053	Denmark Road, London	Precautionary	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
		construction								
720054	Albert Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,iii,b
720055	Salusbury Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,iii,b
720056	Salusbury Road, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,iii,b
720057	Harvist Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720058	Brondesbury Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720059	Brondesbury Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720060	Albert Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720061	Claremont Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720062	Harvist Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720063	Fernhead Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720064	Saltram Crescent, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720065	Kilburn Lane, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,iii,b
720066	Harvist Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720067	Kingswood Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720068	Summerfield Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720069	Summerfield Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720070	Victoria Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720071	Victoria Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720072	Hartland Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720073	Summerfield Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720074	Albert Road, London	Precautionary	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
		construction								
720075	Saltram Crescent, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720076	Fernhead Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720077	Portnall Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720078	Ashmore Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720079	Bravington Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720080	Kilburn Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720081	Kilburn Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720082	Severn Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720083	Selby Square, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720084	Dowland Street, London	Precautionary	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
		construction								
720086	Carlton Vale, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720091	Bramshill Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720092	Acton Lane, London	LM1400	68.1	60.0	72.6	77.4	68.7	65.8	60.0	4,A,iii,b
720104	Seacole Close, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720109	Acton Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720113	Bramshill Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720115	Fortune Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720116	Enterprise Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720117	Brondesbury Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720119	Brondesbury Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720120	Salisbury Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720122	Carlton Vale, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720123	Herries Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720125	Kilburn Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720126	Kilburn Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720127	Kilburn Lane, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720128	Fernhead Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720129	Fernhead Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720130	Ashmore Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720131	Fernhead Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b



Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720132	Verdi Crescent, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720133	Herries Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720134	Dowland Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720135	Herries Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720136	Harvist Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720139	Sunbeam Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720140	Park Royal Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720141	Sunbeam Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720142	Gorst Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720143	Standard Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720255	Station Road, London	LM1315	60.9	52.8	69.1	73.9	61.5	58.6	52.8	4,A,iii,b
720256	Station Road, London	LM1315	60.9	52.8	69.1	73.9	61.5	58.6	52.8	4,A,iii,b
720257	Station Road, London	LM1315	60.9	52.8	69.1	73.9	61.5	58.6	52.8	4,A,iii,b
720258	Station Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720259	Tubbs Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720260	Ranelagh Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720261	Wendover Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720262	Wendover Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720263	Tubbs Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720264	Nightingale Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720265	Wendover Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720266	Tubbs Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study <sup>3</sup> or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Department of Environment, Food and Rural Affairs (Defra) noise maps <sup>4</sup> , etc.)
7	Generic levels

  

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied

  

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

  

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

<sup>3</sup> Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

<sup>4</sup> Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.

### 3.3 Future baseline methodology

#### Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.
- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

#### Operation

- 3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2012) as a result of changes in baseline sound sources.
- 3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2012 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.
- 3.3.6 Therefore for the purposes of this assessment future baseline levels have been assumed to be identical to those identified in Table 1 for 2012.
- 3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a reduction in baseline sound level might be likely. Where reductions in baseline sound level have been identified a further screening assessment has been completed to identify if these changes would be likely to materially affect the operational sound assessment.
- 3.3.8 The screening assessment has not identified any locations in this area where a decrease in future baseline (2026), compared to existing baseline (2012), is likely to materially affect the operational sound assessment.

## 4 References

Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013